Health Consultation

Oeser Company Superfund Site
Bellingham, Whatcom County, Washington

February 10, 2003

Prepared by

The Washington State Department of Health
Under a Cooperative Agreement with the
Agency for Toxic Substances and Disease Registry

Washington State Department of Health

Foreword

The Washington State Department of Health (DOH) has prepared this health consultation in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR). ATSDR is part of the U.S. Department of Health and Human Services and is the principal federal public health agency responsible for health issues related to hazardous waste. This health consultation was prepared in accordance with methodologies and guidelines developed by ATSDR.

The purpose of a health consultation is to identify and prevent harmful human health effects resulting from exposure to hazardous substances in the environment. Health consultations focus on specific health issues so that DOH can respond quickly to requests from concerned residents or agencies for health information on hazardous substances. DOH evaluates sampling data collected from a hazardous waste site, determines whether exposures have occurred or could occur, reports any potential harmful effects, and recommends actions to protect public health.

For additional information or questions regarding DOH, ATSDR or the contents of this Health Consultation, please call the health advisor who prepared this document:

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Glossary

Acute	Occurring over a short period of time. An acute exposure is one which lasts for less than 2 weeks.
Agency for Toxic Substances and Disease Registry (ATSDR)	The principal federal public health agency involved with hazardous waste issues, responsible for preventing or reducing the harmful effects of exposure to hazardous substances on human health and quality of life. ATSDR is part of the U.S. Department of Health and Human Services.
Aquifer	An underground formation composed of materials such as sand, soil, or gravel that can store and/or supply groundwater to wells and springs.
Chronic	A long period of time. A chronic exposure is one which lasts for a year or longer.
Contaminant	Any chemical that exists in the environment or living organisms that is not normally found there.
Exposure	Contact with a chemical by swallowing, by breathing, or by direct contact (such as through the skin or eyes). Exposure may be short-term (acute) or long-term (chronic).
Groundwater	Water found underground that fills pores between materials such as sand, soil, or gravel. In aquifers, groundwater often occurs in quantities where it can be used for drinking water, irrigation, and other purposes.
Hazardous substance	Any material that poses a threat to public health and/or the environment. Typical hazardous substances are materials that are toxic, corrosive, ignitable, explosive, or chemically reactive.

Media	Soil, water, air, plants, animals, or any other part of the environment that can contain contaminants.
Model Toxics Control Act (MTCA)	The hazardous waste cleanup law for Washington State.
Organic	Compounds composed of carbon, including materials such as solvents, oils, and pesticides which are not easily dissolved in water.
Plume	An area of contaminants in a specific media such as groundwater.
Remedial investigation	A study designed to collect the data necessary to determine the nature and extent of contamination at a site.
U.S. Environmental Protection Agency (EPA)	Established in 1970 to bring together parts of various government agencies involved with the control of pollution.
Volatile organic compound (VOC)	An organic (carbon-containing) compound that evaporates (volatilizes) easily at room temperature. A significant number of the VOCs are commonly used as solvents.

Background and Statement of Issues

The Washington State Department of Health (DOH) conducted this health consultation in response to the U.S. Environmental Protection Agency's (EPA's) request for public comment on its proposed plan for cleaning up contamination at the Oeser Company (Oeser), a wood treating facility, located at 730 Marine Drive, Whatcom County, Washington.[1] This health consultation report, prepared in cooperation with the Agency for Toxic Substances and Disease Registry (ATSDR), summarizes DOH's response to EPA's proposed plan.

The Oeser facility, which began operation in 1943, occupies approximately 26-acres in a mixed industrial and residential area. The northeastern portion of the facility lies within the City of Bellingham. The facility currently treats utility poles and pilings with a pentachlorophenol (PCP) solution (i.e., PCP dissolved in a carrier oil similar to light diesel).[2] Creosote, which is made up of many chemicals including some volatile components, was used to treat wood at the site in the past.[2,3] Some of the wood treating preservatives have been released into the environment through spills, leaks, and waste disposal activities.[2]

The Oeser site was added to EPA's National Priorities List (NPL) in October 1997 because significant amounts of contamination were found on the property that posed a potential threat to human health and the environment.[2] PCP; polycyclic aromatic hydrocarbons (PAHs), one the predominant chemical groups found in creosote; dioxin, a contaminant associated with PCP; petroleum; and other organic compounds have been identified in soil, groundwater, surface water, sediment, and air on and off of the Oeser facility during environmental investigations conducted at the site. The concentrations of some of the chemicals detected on the Oeser property exceed soil and groundwater cleanup levels, which are developed to be protective of human health and the environment. Contaminants levels on adjacent properties that are associated with releases from the Oeser property were generally lower and determined by EPA to not pose a significant threat to human health.[2,4]

EPA's preferred alternative for reducing or eliminating the potential threat posed by the contaminated media on the Oeser property is capping and excavation. No remedial measures are proposed for properties adjacent to the Oeser property.[4]

Discussion

EPA's proposed plan describes its preferred alternative (capping and excavation) for addressing contamination at the Oeser property and provides information and rationale that EPA used to select the alternative. The following items summarize DOH's comments on the plan:

1. The proposed plan indicates that properties adjacent to the Oeser facility will not require cleanup because releases of chemicals from Oeser (e.g., PCP, dioxins, PAHs) in these areas have not resulted in concentrations that pose a significant health threat.[4] DOH will be evaluating on- and off-property contaminant levels and potential exposures to verify

EPA's findings.

2. Widespread petroleum contamination that exceeds Model Toxics Control Act (MTCA) cleanup levels was detected in soils at the North Treatment area as well as other areas of the site.[2] However, these results are not presented on the figures along with the other contaminant results. This information is necessary to evaluate whether the proposed remedial measures will effectively reduce exposures to petroleum contaminants or prevent their migration to the deep, potable groundwater.

3. The surface soil sample results do not support the boundaries selected for the proposed shallow (0 to 0.5 feet) excavation areas.[2,4] For example, one of the areas proposed for excavation is located in the wood storage area. This proposed excavation area is approximately 50 feet in diameter and appears to have been selected based on the elevated dioxin levels found in one surface soil sample collected at this location. Adjacent surface soil samples, some of which are over 200 feet away, also contain dioxins at similar levels suggesting that the extent of the dioxin contamination above cleanup levels may be extend beyond the proposed 50-foot boundary. Additional surface soil sampling should be conducted to evaluate whether the excavation boundary in the wood storage area as well as the other proposed excavation areas across the site should be expanded. This is necessary to ensure that workers, and possibly trespassers, will not be exposed to harmful levels of surface soil contaminants as well as protect nearby residents who could be exposed to these contaminants during the drier months of the year when dust can be generated.

4. No excavation or capping is proposed for a small area of the east treatment area, an area where significant contamination has been found.[4] Measures should be taken to prevent infiltration of precipitation and/or surface water in this area, reducing the chance for contaminants to mobilize and affect the deep, potable groundwater.

5. Contaminated groundwater; some of the contaminated vadose soils, which may contain nonaqueous phase liquids (NAPLs); and free product will remain in the subsurface at the Oeser property according to the proposed plan.[4] However, it does not appear that an evaluation of the vapor intrusion pathway (contaminated media to indoor air) was considered when selecting this option although site data suggests that vapor likely exists in the subsurface.[2] Given that an office building is located on the property and residences and businesses are located immediately adjacent to this contaminated property, the indoor air pathway should be evaluated to ensure that chemicals are not volatilizing into indoor air from contaminated groundwater, soil or NAPLs. Utility lines should also be evaluated to determine if they are acting as possible conduits for vapor migration to on- and off-site buildings. This work should be done prior to making final cleanup decisions.

6. Soil cleanup levels (CULs) were derived to be protective of exposure to chemicals of potential concern (COPC) via incidental ingestion of soil, inhalation of particles and

vapors, and dermal contact with soil.[5] It should be confirmed that these soil CULs will also protect groundwater, as this is one of the remedial goals.

Child Health Initiative

The Oeser Company Superfund site is located in an area where children potentially could be exposed to contaminants through the soil, water, sediment, and air pathways. Children can be uniquely vulnerable to the hazardous effects of environmental contaminants. When compared to adults, pound for pound of body weight, children drink more water, eat more food, and breathe more air. Children have a tendency to play closer to the ground and often put their fingers in their mouths. These facts lead to an increased exposure to contaminants in various environmental media. For these reasons, it is very important to consider the specific impacts that contaminants may have on children.

EPA evaluated child exposures during its investigation of the Oeser site. DOH will verify the EPA findings as part of the health assessment it is conducting for the site.

Conclusions

1. DOH's comments, above, should be addressed prior to any final remedial decisions.

2. DOH will evaluate environmental data collected at and adjacent to the Oeser property to verify EPA's finding that no significant exposures to site related contaminants is occurring at nearby properties.

Recommendations/Action Plan

1. EPA should address the issues and concerns raised by DOH prior to selecting the final cleanup alternative.

   Action

   EPA should revise the proposed plan and provide a copy to DOH for review.

2. DOH should evaluate the site environmental data and determine whether exposures to chemicals identified in the various environmental media pose a health threat.

   Action

   DOH will conduct a public health assessment. The results of the assessment will be summarized in a public health assessment report.

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References

1. Environmental Protection Agency. Fact Sheet. Oeser Company Site, Bellingham, Washington. December 2002.

2. Environmental Protection Agency Region 10 START-2. The Oeser Company Superfund Site Remedial Investigation Report. June 2002.

3. Agency for Toxic Substances and Disease Registry. Draft Toxicological Profile for Wood Creosote, Coal Tar Creosote, Coal Tar, Coal Tarpitch and Coal Tar Pitch Volatiles. September 2000.

4. Environmental Protection Agency. Oeser Proposed Plan. December 2002.

5. Environmental Protection Agency Region 10 START-2. The Oeser Company Superfund Site Feasibility Study Report. August 2002.

Certification

This Health Consultation was prepared by the Washington State Department of Health under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was begun.

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The Division of Health Assessment and Consultation, ATSDR, has reviewed this public health consultation and concurs with the findings.

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